Commonwealth of Kentucky
Division for Air Quality

DRAFT PERMIT STATEMENT OF BASIS

DRAFT CONDITIONAL MAJOR PERMIT/SYNTHETIC MINOR NO. F-04-037
TOYOTA TSUSHO AMERICA, INC.
PARIS, KY
NOVEMBER 30, 2004
LINK SHUMAKER, REVIEWER
PLANT I.D. # 21-017-00034
APPLICATION AI # 51005

GENERAL SOURCE DESCRIPTION:
Toyota Tsusho America Incorporated plans to construct a secondary aluminum processing plant in Paris, KY. This plant is to melt and flux aluminum scrap from a neighboring plant. Molten product and aluminum ingots will be returned to the neighboring plant. The plant will operate two side-well furnaces each with a dry hearth, holding hearth, two charging wells, and a circulating pump. A lime-injected bag house will be used to control emissions. Under 40 CFR Part 63 Subpart RRR, these melting furnaces are classified as Group 1 Furnaces.

This source is taking enforceable limits on its HCl emissions to preclude Title V status. Regulation 59:010 applies to particulate emissions, therefore the source is non-major with regards to PM and PM10. Because HCl and particulate limits already apply and the source is not a major source, 40 CFR Part 63 Subpart RRR limits only Dioxins and Furans (D/F).

CREDIBLE EVIDENCE:
The permit described in this document contains provisions that require specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following Federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

PLANT-WIDE EMISSION AND OPERATING CAPS:
Emissions from the plant shall not exceed 9 tpy of any single HAP.

DETAILED UNIT DESCRIPTIONS AND BASIS FOR PERMIT CONDITIONS:

EMISSION UNIT: Two Melting Furnaces with Natural Gas Combustion and a Lime-Injected Baghouse

Description: The permittee will operate two melting furnaces in batch mode. Each batch cycle will require 8 hours for melting and charging, 1 hour for Cl_2 gas treatment, and 3 hours for molten aluminum transfer; the entire cycle will take 12 hours. Each furnace will be equipped with a side-well. Molten aluminum from the hearth will be pumped to the side-well where it will melt in-coming scrap material. Scrap will be charged to the side-well via conveyor. In addition, aluminum ingots and sows may be charged to the hearth. Cl_2 gas flux will be added to the side-well of the furnace through the molten aluminum pump. Solid flux may also be added to the side-well as a backup to ensure product quality. Argon gas will be bubbled through the molten aluminum to

further refine the product. Combustion gases are vented to the atmosphere; gases from the melting and fluxing are vented to spark arresters and then to a lime-injected baghouse. Under 40 CFR Part 63 Subpart RRR, these melting furnaces are classified as Group 1 Furnaces.

Unit ID#	Unit Name	Construction Commenced
1.1	Two Melt Furnaces	Spring 2005

Control Device: Lime injected baghouse
Control efficiencies: 95% for TSP
90% for HCl

Emission Factors:
For Melting Furnace (Molten Aluminum Pump, Charging Well, and Dry Hearth):

Pollutant	EF [lb/ton Al fed]	Source
PM	4.3	AP-42
HCl	0.38	Stack Test
D/F	0.00000000273	Stack Test

For Combustion:

Pollutant	EF (lb/ton Al fed)	Source
PM	7.6	AP-42
SOx	0.6	AP-42
NOx	100	AP-42
VOC	5.5	AP-42
CO	84	AP-42

APPLICABLE REGULATIONS:
401 KAR 59:010 New process operations

Comments:
Construction of the source is to commence near January, 2005. The company has elected to take enforceable limits on its HAP emissions. The source will not emit more than 9 tpy of a single HAP to qualify as a conditional major source. The source will process approximately 18.26 tph scrap aluminum from a neighboring plant, returning the molten purified product to the neighboring plant at the end of the process.

Insignificant Activities:

Insignificant Activity	Applicable Regulations
Paved Roads/Scrap Storage	401 KAR 63:010
In-line Degasser (Argon gas only)	401 KAR 59:010
Dross Storage/ Handling	401 KAR 63:010
Crucible Operations	401 KAR 63:010